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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/053,079	01/17/2002	Lisa Karen Fleischer	1-3-3-5	5536

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Ryan, Mason & Lewis, LLP
Suite 205
1300 Post Road
Fairfield, CT 06430

EXAMINER

NGUYEN, HANH N

ART UNIT	PAPER NUMBER
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2616

DATE MAILED: 07/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/053,079

Applicant(s)

FLEISCHER ET AL.

Examiner

Hanh Nguyen

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-14, 16, 17 and 20-22 is/are rejected.
- 7) ☒ Claim(s) 6, 15, 18 and 19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>1/17/02</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

Claim 20 is objected to because of the following informalities: “the steps of the steps of selecting ...” on lines 4 & 5 should corrected as “ the steps of selecting, ...” . Appropriate correction is required.

Specification

The disclosure is objected to because of the following informalities: the web site address <http://www.dataconnection.com> on page 11, lines 4 should be removed from the specification.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 2, 7-14, 20-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 8, it is not clear what is meant by “a value of a function” on line 11. Is “ a predetermined value” on line 12 referred to “ at least one predetermined value” on line 4.

In claims 1, 21 and 22, it is not clear what is meant by “ adjusting the minimum total cost through an exponential function based on an amount of flows through links” How is the “exponential function” related to “the minimum total cost” ? what is meant by “an objective value” on line 16 of claim 1 and line 2 of claim 7 ? If “the objective value” means the cost of flow, then it has to be clearly written.

In claim 2, what is meant by “ a function that represents a **marginal cost** of a link” ?

Examiner reserves the right not to consider this limitation until further explanation from applicant's response.

In claim 9, what is meant , on line 4, by “ updating until **an aproximate solution** to the network routing is within a predetermined error” ?

In claim 10, what is meant by “a dual objective function” . Further explanation is required to clarify the claimed limitation.

In claim 11, what is meant by “the dual objective function is part of linear program designed to maximize a first variable subject to a first plurality of conditions”

In claim 12, a similar problem relating “to an objective function as part of second linear program.....”

In claim 13, line 3, How is an exponential function made or related to the costs updating?

In claim 14, lines 6 and 9, there are similar problems occurred in claim 13 which related to how an exponential function made or related to the costs updating.

In claim 20, what is meant, on lines 3 and 6, by “a value of a function”. Is this referred to “ a value of a function” in claim 8 ?

Claims 8, 16, 17 are rejected under 35 USC 102(e) as being anticipated over Liu et al. (US pat. 6,744,727 B2).

Regarding to Claim 8. Liu et al. teaches a method for determining routing in a network (determining a backup path 404, fig.4) comprising a plurality of nodes interconnected through links (fig.1, topology comprising nodes a-e interconnecting via flows), the method comprising:

setting costs for each link in the network (fig.4, step 403; col.15, lines 10-15; determining link cost for traffic flow); initializing primary and second flows for each link to at least one predetermined value (see Fig.4, step 402, see col.9, lines 62-67& col.15, lines 3-10; selecting traffic flow R from a set of traffic flows that was affected by a changed in the network, the traffic flow is set to 1 and not larger than the current number of traffic flows in the network);

selecting a commodity, each commodity comprising a source-sink pair and having a demand (see fig.4, step 404, selecting a backup path with a current spare available capacity for a selected node pair; col.15, lines 16-27);

routing a demand through the network for the selected commodity (see Fig. 4, col.14, lines 17-28; the Successive Survivable Routing Scheme (SSR) routes backup paths for individual traffic flows, one at a time);

performing the steps of selecting, routing, and updating the cost until a value of a function is at least as much as a predetermined value (SSR updates links within selected traffic flows backup path, recalculate spare capacity allocation, selects another traffic flow, and repeat the process. For each traffic flow, each backup path fould is guaranteed to have spare capacity, total link cost lower than or at least the same as total spare capacity and total link cost of the current back up path; see col.14, lines 37-45 & col.15, lines 15, lines 25-35).

Regarding to Claims 16 and 17, the limitations of these claims have been addressed in claim 8. .

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 3, 4, 5 and 21-22 are rejected under 35 U.S.C. 102(e) as being anticipated by Chaudhuri (US Patent No. 6,324,162 B1) .

Regarding to Claims 1, 3 and 4. Chaudhuri teaches a method for determining routing in a network comprising a plurality of nodes interconnected through links (see fig.4, determining alternate routing in network comprising nodes 12A-12G interconnecting via links 14₁ to 14₁₀), where a demand for each of a plurality of commodities is to be routed over the network (see col.6, lines 35-45; an availability capacity between node 12A and node 12D is check to restore the failed link 14₉), the method comprising:

routing a demand for one of the commodities on a set of paths the set of paths comprising at least one primary path and at least one secondary path, wherein demand will be routed from a primary path to a secondary path durring a failure (see fig.3, col.7, lines 45-65; nodes 12A and 12E routes traffic from a working path comprising links 14₃ 14₁₀ and 14₉ to a resoration path comprising links 14₈ 14₇ and 14₆ ; or a restoration path indicated in fig.4, col.8, lines 50-60, comprising links 14₃ 14₅ and 14₆); each of the restoration paths is selected by RPCS 20 to be shortest paths (see col.4, lines 55-65) (the set of paths having a minimum cost),

adjusting the total minimum cost for each of a number of potential failures (see col.4, lines 25-35; for each link that could fails between endpoint nodes, RPCS20 computes a respective restoration path, wherein each restoration paths is well-known in the art to have a respective total cost, see example in col.4, lines 25-35).

iterating the routing, adjusting, and performing until an objective value is minimized, whereby flow for each of the links in the network is determined (see col.5, lines 30-40; the process of computing restoration path is repeated for each link using shorest path algorithm);

Regarding claims 21 and 22, with the discussion of claim 1, Chaudhuri has discloses most of limitations addressed in claim 1, and further discusses a memory storing computer code; a processor coupled to the memory (see fig.1, col.3, lines 45-52; RPCS 20 comprises a computer 22 which inherently comprises a memory and a processor which executes program codes stored in the memory).

Regarding to Claim 5. Chaudhuri teaches the method of claim 4, wherein the backup flow strategy comprises allowing secondary paths to be shared (local restoration channel 18 of link 14₉ replaces a failed channel between nodes 12A and 12D; see fig.2, col.6, lines 20-45), secondary paths to be dedicated (see fig.3, col.7, lines 45-65; nodes 12A and 12E routes traffic from a working path comprising links 14₃ 14₁₀ and 14₉ to a resoration path comprising links 14₈ 14₇ and 14₆), or secondary paths to be shared and dedicated (see col.8, lines 50-55; nodes 12A and 12E routes traffic from a working path comprising links 14₃ 14₁₀ and 14₉ to a resoration path comprising links 14₃ 14₅ and 14₆).

Allowable Subject Matter

Claims 6, 15, 18 and 19 are objected to as being dependent upon a rejected base claim, but would be allowable if reete in independent form including all of the limitation of the base claim and any intervening claims.

Response to Arguments

Applicant's arguments with respect to claims 1-22 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Russ (US Pat. 5,862,125);

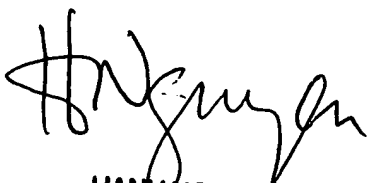
Skalecki et al. (US pat. 6,914,912 B1).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh Nguyen whose telephone number is 571 272 3092. The examiner can normally be reached on Monday-Friday from 8:30 to 4:30. The examiner can also be reached on alternate

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ahmad Matar, can be reached on 571 272 7488. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hanh Nguyen


HANH NGUYEN
PRIMARY EXAMINER